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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/850,367	05/08/2001	Jin-Ho Ha	6192.0233.AA	2543
7590		01/11/2006	EXAMINER	
McGuireWoods LLP		NGUYEN, HOAN C		
1750 Tysons Blvd		ART UNIT		
Suite 1800		PAPER NUMBER		
McLean, VA 22102		2871		

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/850,367	Applicant(s) HA ET AL.	
	Examiner HOAN C. NGUYEN	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) 1-33 and 43-49 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 34-42 and 50-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____. |

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DETAILED ACTION

Response to Amendment

Applicant's arguments with respect to amended claims 34-36, 38-39, 41-42, 50 and 51 based on the Preliminary Amendment filed on 08 July 2005 have been considered but are moot in view of the new ground(s) of rejection. This is non-final rejection.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, "the fixing unit is shorter than the highest one of element constituting the PCB" (what is the fixing unit in Fig. 10? It must be the screws, not a circuit board, please use the proper language for the description at the connection) in claim 42 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

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application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 34, 38-42, 50 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moon (US6229695B1) in view of Lutz, Jr. (US6181572B1).

Moon teaches (Figs. 2-8) a liquid crystal display device comprising:

Claim 34 and 52:

- displaying unit (a display panel 60) for displaying an image;
- a bottom chassis (frame 40) receiving the displaying unit;
- a frame (bottom housing 30) receive the bottom chassis and having an opening exposing a bottom surface of the bottom chassis through window 32;
- a printed circuit board 70 directly mounted on a bottom surface of the bottom chassis;

Claim 50:

- a front case (top housing 20);

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- a rear case (bottom housing 30);
- a liquid crystal display device 60 disposed between the front case and rear case and comprising:
 - displaying unit (a display panel 60) for displaying an image;
 - a bottom chassis (frame 40) receiving the displaying unit;
 - a frame (bottom housing 30) receive the bottom chassis and having an opening exposing a bottom surface of the bottom chassis through window 32;
 - a printed circuit board 70 directly mounted on a bottom surface of the bottom chassis;

wherein

Claims 38-40:

- a fixing unit (screw 76 and extension 58) for fixing the printed circuit board 70 to a bottom surface of the bottom chassis 40 at 58 according to claim 38;
therefore, the printed circuit board is arranged between the bottom chassis and the fixing unit according to claim 39 and the printed circuit board is overlapped at one end thereof with the fixing unit according to 40.

Claim 41:

- the fixing unit 76 including a bracket (extension 58) having a first end connected to the PCB and a second end connected to the bottom surface of the bottom chassis.

Claim 42:

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- the fixing unit (extension 58) is shorter than the highest one of element constituting the PCB.

However, Moon fails to disclose the frame (bottom housing) formed by molding.

Lutz, Jr. teaches the housing is made of plastic, which is formed by molding.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify a liquid crystal display device as Moon disclosed with the housing made of plastic, which is formed by molding for creating light weight and less expensive device for the same market as taught by Lutz, Jr. (col. 1 lines 29-31).

2. Claims 35 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moon (US6229695B1) in view of Lutz, Jr. (US6181572B1) as applied to claims 34, 36-42, 50 and 52 and in further view of Satoh (US6016083A).

Moon also discloses a liquid crystal display device comprising the opening exposes a center portion of the bottom surface of the bottom chassis (claim 36); and the printed circuit board includes a power supplying unit (battery) that supplies power to the display unit and a signal converting unit (inherence) for converting a signal provided to the display unit (claim 37).

However, Moon does not explicitly disclose a liquid crystal display device comprising a shield case covering the PCB.

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Sato teaches (Fig. 6) a liquid crystal display device comprising a shield case covering the PCB.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify a liquid crystal display device as Moon disclosed with a shield case covering the PCB for suppressing noise generated by the electronic circuit is by-passed, and electromagnetic radiation of noise from a cable connected to the printed-circuit board via a connector, as taught by Lutz, Jr. (abstract).

Response to Arguments

Applicant's arguments filed on 17/11/2005 have been fully considered but they are not persuasive.

Applicant's ONLY arguments are follows:

Moon fails to disclose or suggest the mold frame having an opening exposing the bottom surface of the bottom chassis.

Examiner's responses to Applicants' ONLY arguments are follows:

Moon discloses the mold frame having an opening exposing the bottom surface of the bottom chassis (see attachment).

To overcome the prior art, applicant should specify the relative positions of the mold frame and PCB. Fig. 4 of instant application shows PCB disposed outside the mold frame and directly on the bottom chassis.

Conclusion

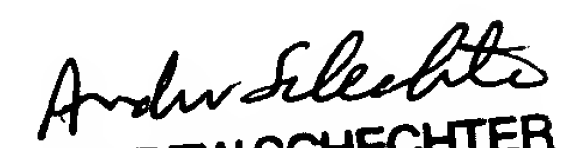
Any inquiry concerning this communication or earlier communications from the examiner should be directed to HOAN C. NGUYEN whose telephone number is (571) 272-2296. The examiner can normally be reached on MONDAY-THURSDAY:8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim H. Robert can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HOAN C. NGUYEN
Examiner
Art Unit 2871

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ANDREW SCHECHTER
PRIMARY EXAMINER

Attachment ~~to~~ please scan and mail

Fig. 4

